

**REMARKS**

Claims 1-3, 5 and 8-13 were pending in this application, with claims 4, 6 and 7 having previously been canceled, without prejudice or disclaimer. By the present Amendment, claims 1, 2 and 8-10 have been amended to clarify the claimed subject matter, and new claims 14-16 have been added. Claims 1-3, 5 and 8-13 would be pending upon entry of this Amendment, with claim 1 being the sole pending claim in independent form.

Claims 1-3, 5 and 8-13 were rejected under 35 U.S.C. §112, first paragraph, as purportedly failing to comply with the written description requirement. Claims 1-3, 5 and 8-13 were rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite.

In response, the claims have been amended to address the issues referenced in the Office Action.

It is noted that paragraph [0026] of the application states as follows:

The content of the ultraviolet absorber varies depending on the type of the ultraviolet absorber to be used, thickness of the anti-ultraviolet layer, and so forth, and therefore it cannot be generally defined. However, it is preferably 1 to 20 parts by weight, more preferably *5 to 15 parts by weight*, with respect to 100 parts by weight of the binder component. By using the ultraviolet absorber at a content of 1 part by weight or more with respect to 100 parts by weight of the binder component, sufficient anti-ultraviolet property can be imparted, and by using it at a content of 20 parts by weight or less, increase of yellowing due to the ultraviolet absorber can be suppressed, it can be made sufficiently miscible with the aforementioned ionizing radiation curable resin composition, and reduction of the hard coat property of the anti-ultraviolet layer can be prevented. That is, even if the ultraviolet absorber is used at a content exceeding 20 parts by weight, further improvement in the anti-ultraviolet property cannot be obtained, and such a content rather invites increase in yellowing of the anti-ultraviolet layer, and in addition, degradation of physical properties of the coated layer such as surface hardness.

Accordingly, applicant submits that the claimed subject matter is fully and clearly supported by the disclosure as originally filed.

Withdrawal of the rejections under 35 U.S.C. §112 is respectfully requested.

Claims 1-3, 5 and 8-13 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Onozawa et al. (US 6,103,370), and in view of Nakamura et al. (US 2002/0085284 A1) and in view of the Ciba® TINUVIN® 328 and 1130 product literature. Claims 1, 8 and 11 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over McMan et al. (US 2004/0241469 A1) in view of Onozawa and further in view of Nakamura.

Applicant respectfully submits that the present application is allowable over the cited art, for at least the reason that the cited art does not disclose or suggest the aspects of the present application that (a) the anti-ultraviolet layer comprises at least an ionizing radiation curable resin composition, an ultraviolet absorber and spherical microparticles having a mean particle diameter of 1 to 20  $\mu\text{m}$ , (b) the microparticles are contained in an amount of 0.4 to 3% by weight in the anti-ultraviolet layer when the layer has been cured, and (c) the content of the ultraviolet absorber is 5 to 15 parts by weight based on 100 parts by weight of the ionizing radiation curable resin composition following curing.

As discussed in the present application, a surface protective sheet including such an anti-ultraviolet layer (with the above-mentioned aspects) can be used, for example, to protect surfaces of displays such as direction boards, advertisements, signboards and signs, including in particular to prevent change and fading of colors of images and the like in the display, caused by the influence of ultraviolet rays, and in particular, such spherical microparticles can suppress the yellowing of the anti-ultraviolet layer.

Onozawa, as understood by applicant, proposes a hard coat sheet comprising a base sheet, and a coat layer which is provided on the base sheet and formed of a resin composition containing 0.1 to 100 parts by weight of a radiation-curing silicone resin based on 100 parts by weight of a multi-functional acrylate.

Onozawa, column 3, lines 45-47 (reproduced below), mentions the possible addition of an ultraviolet absorber (more specifically, benzophenone-based, benzotriazol-based substances) as an additive:

If required, a tackifier, a filler, a softening agent, an anti-oxidant, *an ultraviolet absorbent*, a cross linking agent and/or the like can be further incorporated in the adhesive. The tackifiers include rosin-based resins, terpene phenol resins, terpene resins, organic hydrocarbon-modified terpene resins, petroleum resins, coumarone-indene resins, styrene-based resins, phenol resin, xylene resin and the like. Fillers include zinc flower, titanium oxide, silica, calcium carbonate, barium sulfate and the like. The softening agents include a process oil, liquid rubbers, a plasticizer and the like. The anti-oxidants include anilide-based, phenol-based, phosphite-based, thioester-based substances and the like. *The ultraviolet absorbents include benzophenone-based, benzotriazol-based substances and the like.* The cross linking agents include epoxy-based, isocyanate-based, a metal chelate-based substances and the like.

However, Onozawa (see examples 1-5, 9) proposes only the addition of 1 to 1.5 parts by weight of the absorber.

Further, Onozawa says nothing whatsoever regarding use of spherical microparticles along with the ultraviolet absorber.

Nakamura, as understood by applicant, proposes an anti-glare, anti-reflection film 1, as shown in Fig. 1 of Nakamura, has a layer structure comprising transparent support 2, hard coat layer 3, anti-glare layer 4 and low refractive index layer 5 arranged in this order. The film 1, so configured, can be loaded in high-resolution liquid crystal display devices and purportedly has the characteristics of anti-reflection, an anti-glare, contamination resistance, scratch-resistance and transmission image sharpness.

Nakamura ([0039]-[[0043]]) proposes that the hard coat layer 3 in the anti-glare, anti-reflection film 1 can be a polymer prepared via a polymerization reaction of an ethylenically unsaturated monomer which is dissolved in a solvent together with various additives, coated and

dried, and thereafter cured via a polymerization reaction promoted by the action of an ionizing radiation or heat. Nakamura further indicates that particulate matting agent 6 is dispersed in anti-glare layer 4.

However, Nakamura says nothing whatsoever regarding use of an ultraviolet absorber.

Further, while Nakamura ([0060]) mentions the possible addition of spherical particles as the particulate matting agent 6 dispersed in the anti-glare layer 4, Nakamura as understood does not disclose or suggest that the spherical particles (a) have a mean particle diameter of 1 to 20  $\mu\text{m}$ , and (b) are contained in an amount of 0.4 to 3% by weight in the anti-ultraviolet layer when the layer has been cured. Such aspects (a) and (b) of the present application are likewise not disclosed in the other cited references (including Ciba® TINUVIN® 328 and 1130).

In addition, neither Nakamura nor any of the other cited references (including Ciba® TINUVIN® 328 and 1130) discloses or suggest that the spherical particles (dispersed as the particulate matting agent 6 in the anti-glare layer 4) in Nakamura can have the effect of suppressing the yellowing of the anti-ultraviolet layer.

McMan, as understood by applicant, proposes an article comprising a naphthalate polyester overcoated with a UV resistant coating comprising the polymerized reaction product of a homogenous mixture comprising: (i) at least one vinyl-functional crosslinkable film former; (ii) more than 10 weight percent benzotriazole UV absorber; and (iii) at least one copolymerizable monomer that solubilizes the benzotriazole.

However, the cited art simply does not disclose or suggest the aspects of the present application that (a) the anti-ultraviolet layer comprises at least an ionizing radiation curable resin composition, an ultraviolet absorber and *spherical microparticles having a mean particle diameter of 1 to 20  $\mu\text{m}$* , (b) the microparticles are contained in an amount of 0.4 to 3% by weight

in the anti-ultraviolet layer when the layer has been cured, and (c) the content of the ultraviolet absorber is 5 to 15 parts by weight based on 100 parts by weight of the ionizing radiation curable resin composition following curing.

Applicant submits that the cited art, even when considered along with common sense and common knowledge to one skilled in the art, does *NOT* render unpatentable the above-mentioned aspects of the present application.

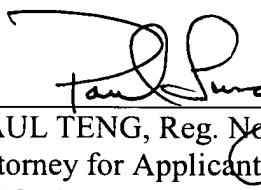
Accordingly, applicant respectfully submits that independent claim 1 and the claims depending therefrom are allowable over the cited art.

In view of the remarks hereinabove, applicant submits that the application is allowable. Accordingly, applicant earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such petition. The Patent Office is hereby authorized to charge any required fees, and to credit any overpayment, to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,

  
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